

इंटरनेट

मानक

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Mazdoor Kisan Shakti Sangathan

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“पुराने को छोड़ नये के तरफ”

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“Step Out From the Old to the New”

IS 11002 (1984): Machine Jig Reamers Morse Taper Shank [PGD
32: Cutting tools]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard



SPECIFICATION FOR MACHINE JIG REAMERS MORSE TAPER SHANK

"REAFFIRMED 1990"

1. **Scope** — Cover the dimensions and requirements for machine jig reamers, morse taper shank.
2. **Dimensions** — As given in Table 1.
3. **Tolerances** — On cutting length l , and overall length L shall be as follows:

Lengths l and L		Tolerance
Over mm	Up to and including mm	mm
6	30	± 1.0
30	120	± 1.5
120	315	± 2
315	1 000	± 3

4. General Requirements

4.1 Bevel Lead Angle — 45° .

4.2 **Back Taper** — Reamers shall be provided with back taper on the cutting diameter and the amount of taper shall be within the limits of tolerance on the cutting edge diameter.

4.3 **Flutes** — Unless otherwise specified they shall be left-hand helical flutes for right hand cutting.

4.4 **Oil Groove** — Shall be provided on the guide portion.

4.5 **Hardness** — The hardness of the guide shall be 610 HV *Min* and the maximum hardness shall not exceed the hardness of the cutting portion. The hardness of other portions shall be according to IS : 5443-1984.

4.6 **Other Requirements** — As given in IS : 5443-1984 'Technical supply conditions for high speed steel reamers (second revision)'.

6. Designation

6.1 A machine jig reamer having diameter (d) 12.0 mm, made from high speed steel and conforming to this standard and suitable for hole with a tolerance of H8 shall be designated as:

Reamer 12.0 IS : 11002

6.2 When the reamer is required for a hole with tolerance other than H8 the appropriate hole tolerance shall be included in the designation after size.

Example :

A machine jig reamer having $d = 12.0$ mm, made from high speed steel and conforming to this standard and suitable for hole with a tolerance of H9 shall be designated as:

Reamer 12.0 (Hole H9) IS : 11002

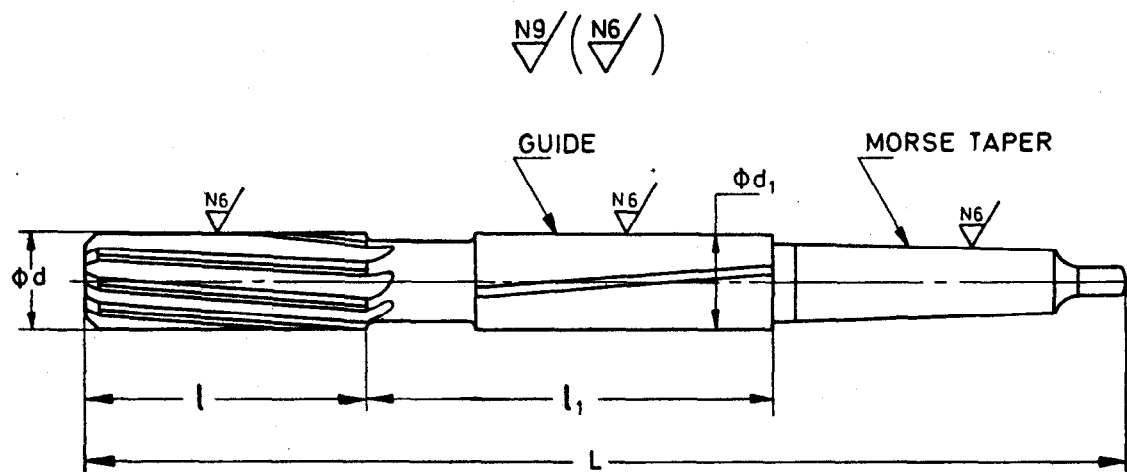
Adopted 21 August 1984

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TABLE 1 DIMENSIONS FOR MACHINE JIG REAMERS WITH MORSE TAPER SHANK
(Clause 2)

All dimensions in millimetres.



d^* m6	Range of Diameter d		l_1	l	L	Morse Taper
	Over	Up to and Including				
5.5	5.30	6.00	46	26	138	1
6.0			46	26	138	
—	6.00	6.70	50	28	144	
7.0	6.70	7.50	53	31	150	
8.0	7.50	8.50	57	33	156	
9.0	8.50	9.50	60	36	162	
10.0	9.50	10.60	64	38	168	
11.0	10.60	11.80	68	41	175	
12.0	11.80	13.20	72	44	182	
(13.0)			72	44	182	
14.0	13.20	14.00	76	47	189	

Note — The diameter d_1 shall be equal to the diameter of the reamer with a tolerance of h6. However, the actual diameter d_1 shall not exceed diameter d .

*Recommended diameters, non-preferred sizes are given within parentheses.

(Continued)

TABLE 1 DIMENSIONS FOR MACHINE JIG REAMERS WITH MORES TAPER SHANK — *Contd*

All dimensions in millimetres.

d^* m6	Range of Diameter d		l_1	l	L	Morse Taper
	Over	Up to and Including				
15·0	14·00	15·00	74	50	204	2
16·0	15·00	16·00	78	52	210	
(17·0)	16·00	17·00	80	54	214	
18·0	17·00	18·00	83	56	219	
19·0	18·00	19·00	85	58	223	
20·0	19·00	20·00	88	60	228	
—	20·00	21·20	90	62	232	
22·0	21·20	22·40	93	64	237	
—	22·40	23·02	95	66	241	
—	23·02	23·60	99	66	264	3
(24·0)	23·60	25·00	101	68	268	
25·0			101	68	268	
(26·0)	25·00	26·50	104	70	273	
28·0	26·50	28·00	107	71	277	
(30·0)	28·00	30·00	109	73	281	
—	30·00	31·50	111	75	285	
—	31·50	31·75	114	77	290	

*Recommended diameters, non-preferred sizes are given within parentheses.

(Continued)

TABLE 1 DIMENSIONS FOR MACHINE JIG REAMERS WITH MORSE TAPER SHANK — Contd
All dimensions in millimetres.

d^* m6	Range of Diameter d		l_1	l	L	Morse Taper
	Over	Up to and Including				
32·0	31·75	33·50	116	77	317	4
(34·0)	33·50	35·50	119	78	321	
(35·0)			119	78	321	
36·0	35·50	37·50	122	79	325	
(38·0)	37·50	40·00	124	81	329	
40·0			124	81	329	
(42·0)	40·00	42·50	127	82	333	
(44·0)	42·50	45·00	129	83	336	
45·0			129	83	336	
(46·0)	45·00	47·50	132	84	340	
(48·0)	47·50	50·00	134	86	344	
50·0			134	86	344	

*Recommended diameters, non-preferred sizes are given within parentheses.

EXPLANATORY NOTE

This standard supersedes IS : 6091-1971 'Specification for machine jig reamers.' In this standard the guide diameter is being specified equal to the minimum hole diameter to be machined. Also the values of cutting length and overall length have been specified similar to the chucking reamer lengths.

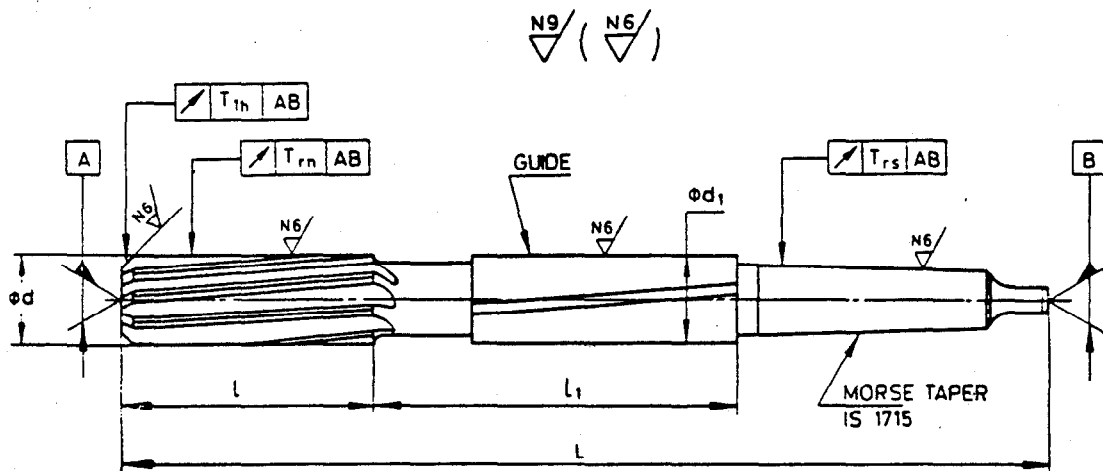
In the preparation of this standard considerable assistance has been derived from BS 122 : Part 2 : 1964 'Specification for milling cutters and reamers, Part 2 Reamers, countersinks and counterbores', issued by the British Standards Institution.

AMENDMENT NO. 1 MARCH 1989
TO
IS : 11002 - 1984 SPECIFICATION FOR MACHINE JIG REAMERS
MORSE TAPER SHANK

(Page 1, clause 4.2) — Substitute the following for the existing clause:

"4.2 Back Taper — Reamers shall be provided with back taper on cutting diameter and value shall be in accordance with IS : 5443-1983 'Technical supply conditions for high speed steel reamers (first revision)' ."

(Page 2, Table 1, figure) — Substitute the following for the existing figure:



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AMENDMENT NO. 2 APRIL 1990
TO
IS 11002 : 1984 SPECIFICATION FOR MACHINE
JIG REAMERS MORSE TAPER SHANK

(*Page 1, clause 6.1, Designation Example*) — Substitute 'Machine Jig Reamer 12°0 IS 11002' for 'Reamer 12°0 IS 11002'.

(*Page 1, clause 6.2, Designation Example*) — Substitute 'Machine Jig Reamer 12°0 (Hole H9) IS 11002' for 'Reamer 12°0 (Hole H9) IS 11002'.

(PE 10)

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